

SolarZone Safe

Energy efficiency and glass protection

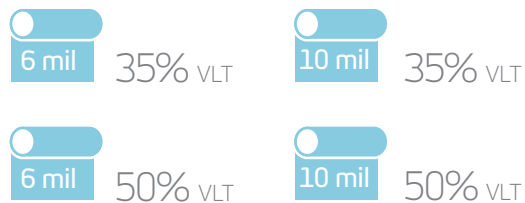
Building codes and insurance policies often demand glazing that meets certain safety standards such as impact-resistant glass in schools to break-in or blast protection for retail locations.

Hanita Coatings' SafetyZone clear security window films are market leaders, delivering security solutions that meet or exceed industry standards.

SolarZone Safe films combine the shard protection of SafetyZone security films with high levels of energy efficiency for a significant return on investment. So, go beyond passive glazing protection. Install Hanita's security laminates with their outstanding solar control properties and contribute to energy efficiency by reducing unwelcome heat buildup.

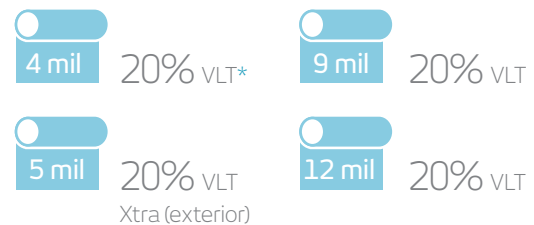
Cold Steel Safe

Neutral gray security films with excellent solar energy rejection cut heat gain and glare, saving on HVAC costs while providing protection from shattered glass.



Silver Safe

These Silver Safe Reflective films combine the reinforced protection of security laminates with superb heat rejection, UV block, and sophisticated appearance. A full range of film thicknesses provides the appropriate solution for different security threats.



OptiTune Safe

Dual reflective OptiTune Safe films combine a warm neutral interior with a bold external appearance to deliver high levels of both energy efficiency and shard protection.



SolarZone Safe films provide

- **Increased protection from glass** shattered by impact, blast, crime or natural disaster
- **Excellent solar heat and glare rejection** for enhanced comfort
- **High levels of energy efficiency** for reduced energy consumption and carbon footprint
- **99% UV block** to cut fading and sun damage

Optical and Solar Properties**	4 mil Silver 20	9 mil Silver 20	12 mil Silver 20	5 mil Silver 20 Xtra (ext)	5 mil OptiTune 22	10 mil OptiTune 30
Item Number	R12122T	R24603T	R32122T	R14422X	R144R2T	R269R3T
Visible light transmitted (%)	19	20	18	17	21	36
Visible light reflected (interior) (%)	61	61	62	62	15	22
Visible light reflected (exterior) (%)	60	57	61	63	32	25
Ultraviolet block (%)	99	99	99	99	99	99
Total solar energy reflected (%)	53	50	53	64	32	26
Total solar energy transmitted (%)	14	15	13	13	18	28
Total solar energy absorbed (%)	33	35	34	23	50	46
Glare reduction (%)	79	78	81	81	77	60
Shading coefficient	0.27	0.30	0.27	0.23	0.38	0.49
Solar heat gain coeff. (G-value)	0.23	0.25	0.23	0.19	0.32	0.42
Winter U-value (IP) BTU/(hr×F×ft²)	0.99	1.08	1.06	1.04	1.03	1.06
Winter U-value (SI) W/(°K×m²)	5.62	6.13	6.02	5.91	5.85	6.02
Emissivity	0.74	0.91	0.88	0.84	0.82	0.90
Total solar energy rejected (%)	77	75	77	81	68	58

Optical and Solar Properties	6 mil Cold Steel 35	10 mil Cold Steel 35	6 mil Cold Steel 50	10 mil Cold Steel 50
Item number	R170L5T	R270L5T	R169L3T	R269L3T
Visible light transmitted (%)	40	40	52	52
Visible light reflected (interior) (%)	16	17	16	16
Visible light reflected (exterior) (%)	18	17	17	16
Ultra violet block (%)	99	99	99	99
Total solar energy reflected (%)	19	18	8	17
Total solar energy transmitted (%)	29	30	42	43
Total solar energy absorbed (%)	52	52	40	40
Glare reduction (%)	56	55	42	40
Shading coefficient	0.52	0.53	0.62	0.64
Solar heat gain coeff. (G-value)	0.44	0.46	0.53	0.55
Winter U-value (IP) BTU/(hr×F×ft²)	1.07	1.08	1.07	1.08
Winter U-value (SI) W/(°K×m²)	6.08	6.13	6.08	6.13
Emissivity	0.90	0.91	0.90	0.92
Total solar energy rejected (%)	56	54	47	45

**Performance results are calculated on 3 mm glass using NFRC methodology and LBNL Window 5.2 software, and are subject to variations in process conditions within industry standards and are only intended for estimating purposes.

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